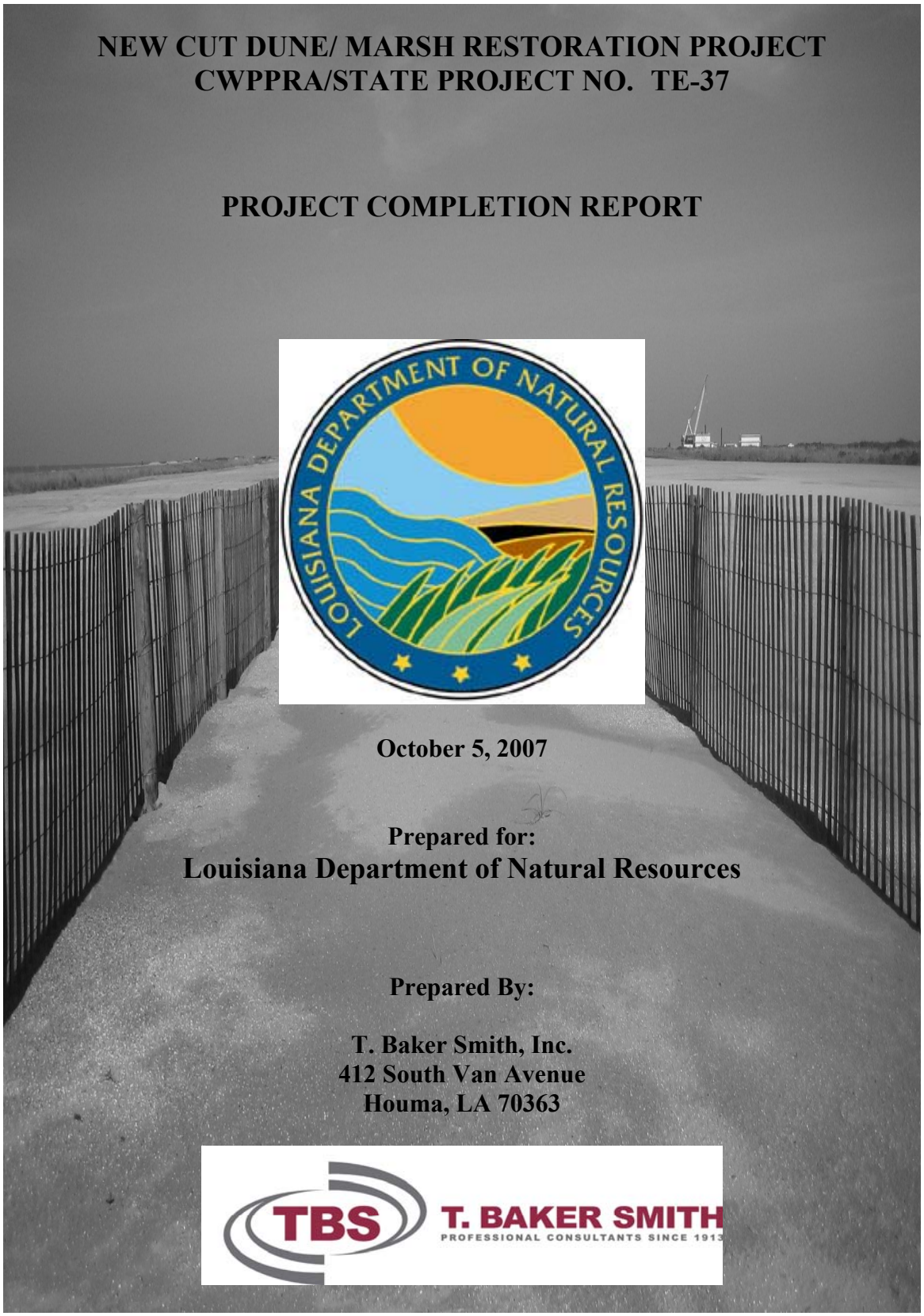
NEW CUT DUNE/ MARSH RESTORATION PROJECT
CWPPRA/STATE PROJECT NO. TE-37

PROJECT COMPLETION REPORT



October 5, 2007

Prepared for:
Louisiana Department of Natural Resources

Prepared By:

T. Baker Smith, Inc.
412 South Van Avenue
Houma, LA 70363

PROJECT COMPLETION REPORT

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PROJECT NAME: New Cut Dune/ Marsh Restoration Project
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Report Date: September 2007 By: T. Baker Smith, Inc.

1. Project Managers/Contracting Officer:

DNR Construction Project Manager	Daniel Dearmond, P.E.	Telephone	985-449-5103
DNR Monitoring Manager		Telephone	
Federal Agency Project Manager	Patricia Taylor, P.E. (EPA)	Telephone	214-665-6403
Construction Administrator/Inspection	Barry J. Kennedy, P.E.	Telephone	985-868-1050

2. Location and Description of Projects as Approved for Construction by Task Force.

The New Cut Dune/ Marsh Restoration Project (TE-37) is located on the Isles Dernieres barrier island chain in Terrebonne Parish, Louisiana. The site of work associated with the base bid is located in the New Cut area between Trinity and East Islands. The borrow area for the project is located approximately three miles south of Wine Island in South Timbalier Block 9 and Block 10. The total bid quantity of hydraulic dredging is 830,650 C.Y. (in-place).

The purpose of the project is to restore the New Cut area using dredged sediment from nearshore sand sources. The project is sponsored by the United States Environmental Protection Agency (EPA) and the Louisiana Department of Natural Resources (LDNR) under the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA).

3. Final, As-Built Features, Boundaries and Resulting Acreage (use attachments if necessary).

The project was constructed as described above. For additional information see attached Appendix C, Pre and Post Construction Plan View and Appendix D, As-Built Drawings.

This project created approx. 8,300 L.F. of dune and nourished approximately 248 acres of beach / island area. The total quantity of material placed on the island was computed to be approx. 1,001,274 C.Y based on the final as-built surveys.

4. Key Project Cost Elements**

	CWPPRA Project Report Estimates Data	Cost Incurred as of July 29, 2007**
Construction	$10,890,022.50	$10,006,753.28
E & D	$1,759,477.00	$1,338,678.91
Land rights	$29,329.52	$30,704.59
Monitoring	$120,218.00	$20,271.10
O & M	$307,473.00	$0
Total	$13,106,520.02	$11,396,407.88

**Cost Incurred does not include Federal Sponsor Administrative costs.

5. Items of Work

Schedule of Items										
Item No.	**Work**	**Est. Quan.***	**Unit**	**Estimated Unit Price**	**Estimated Amount**	**Bid Quan.**	**Bid Unit Price**	**Bid Amount**	**As-Built Quanity**	**As-Built Amount**
Base Bid										
1	Mobilization and Demobilization	1	LS	$	$1,700,000.00	1	$2,235,000.00	$2,235,000.00	1	$2,235,000.00
2	Surveying	1	LS	$153,700.00	$153,700.00	1	$150,000.00	$150,000.00	1	$150,000.00
3	Access Channel	1	LS	$64,400.00	$64,400.00	1	$275,000.00	$275,000.00	1	$275,000.00
4	Containment Dikes	7,468	LF	$8.00	$59,744.00	7,500	$44.00	$330,000.00	8,024	$353,056.00
5*	Hydraulic Dredging (In-place)	830,651	CY	$6.00	$4,983,906.00	830,650	$7.65	$6,354,472.50	844,540.196*	$6,460,732.50
6	Grading and Shaping	1	LS	$83,000.00	$83,000.00	1	$100,000.00	$100,000.00	1	$100,000.00
7	Sand Fencing	17,050	LF	$8.00	$136,400.00	17,050	$11.00	$187,550.00	17,050	$187,550.00
8	Seeding	0	AC	-	-	55	$600.00	$33,000.00	55	$33,000.00
DNR Estimated Amount:					**$7,181,150.00**	**Original Base Bid Amount:**		**$9,665,022.50**		

*** - The As-Built Quantity indicated for Item No. 5 in the table is the volume approved for final payment. The actual As-Built Quantity for Hydraulic Dredging (In-place) was 1,001,274 C.Y. based on the Contractor's As-Built Survey.**

6. Construction and Construction Oversight

Prime Construction Contractor	Weeks Marine, Inc.
Subcontractor – Survey	Fenstermaker and Associates, Inc.
Subcontractor – Sand Fencing and Seeding	Erosion Control Services, Inc.
Original Construction Contract	$9,665,022.50
Change Orders	$ 129,316.00
Final Construction Contract	$9,794,338.50

Construction Oversight Contractor: T. Baker Smith, Inc.

Construction Oversight Amount: $203,697.00

7. Major Equipment Used

2 Tugs – "Jeanne James" and "Shai James"

Survey Vessel – M/V Steve L

Pushboat – George W

30" Cutterhead Dredge "E.W. Ellefsen"

Weeks 542 Bucket Dredge

BT-105 Quarters Barge

BT-213 Quarters Barge

Cat 966 Loader

2 - Cat D6R Dozers

Cat D6H XL Dozer

2 - Cat D6R LGP Dozers

2 – 30B Dragline excavators

CAT 325C Marshbuggie

24' Survey Barge (Fenstermaker)

21' Aluminum Workboat (Inspector's vessel)

4 – Honda Foreman 4-Wheelers

8. Discuss Construction Sequences and Activities, Problems Encountered, Solutions to Problems, etc.

- December 7, 2006: Sub-Contractor, Fenstermaker and Assoc. begin Pre-Construction surveys and layout of access channel.

- January 17, 2007: Weeks Marine Bucket Dredge (542) arrives on project site to begin access channel dredging.
- January 30, 2007: Weeks Marine Bucket Dredge (542) completes dredging of access channel. Pre-Construction Survey Data is Submitted to T. Baker Smith, Inc.
- February 6, 2007: LDNR completes review of Pre-Construction survey data and finalizes project design revisions. Weeks Marine's containment dike construction equipment arrives on site.
- February 7, 2007: T. Baker Smith issues Field Order No. 1, documenting required changes to the project layout. Weeks Marine's containment dike construction equipment arrives on site.
- February 8, 2007: Weeks Marine begins construction of containment dikes.
- March 5, 2007: Weeks Marine completes construction of all containment dikes.
- March 6, 2007: Sub-Contractor, Eustis Engineering on site to perform Nuclear Density and moisture testing.
- March 29, 2007: End of Original 180 day contract time.
- March 31, 2007: Dredge support barges arrive, and equipment is unloaded at site.
- April 2, 2007: Contractor began placement of dredge discharge pipe.
- April 14, 2007: Contractor installs 2 spill-boxes on the western end of the project area.
- April 23, 2007: Contractor installs 3rd spill-box near the access channel.
- April 27, 2007: Contractor completes discharge pipe installation. Awaiting arrival of Dredge.
- May 4, 2007: Dredge "E.W. Ellefsen" arrives on site.
- May 8, 2007: Dredge begins pumping material onto Eastern end of project – working west.
- May 11, 2007: Contractor has pumped adequate material from project Sta. 308+00 to Sta. 302+00.
- May 15, 2007: Contractor has pumped adequate material from project Sta. 308+00 to Sta. 288+00.
- May 23, 2007: Dredge is shutdown due to rough seas.
- May 28, 2007: Sub-Contractor, Erosion Control Services begins installation of Sand Fencing at Sta. 308+00 working westward.
- June 1, 2007: Dredge continues pumping operations this date after being shutdown by rough seas.
- June 3, 2007: Dredge was shutdown due to mechanical failure.
- June 6, 2007: Dredge is repaired and continues pumping operations.
- June 7, 2007: Dredge is shutdown due to rough seas.
- June 8, 2007: Dredge continues pumping operations.

- June 21, 2007: Sub-Contractor, Erosion Control Services, begins seeding dune area.
- June 28, 2007: Erosion control services completes construction of Sand fence this date.
- July 1, 2007: Contractor declares dredging operations complete this date. Dredge is shutdown.
- July 2, 2007: Dredge "E.W. Ellefsen" is towed off job site. Survey crews begin Post-Construction cross-section in fill areas.
- July 3, 2007: Contractor begins removing discharge pipe.
- July 9, 2007: Contractor has demobilized majority of equipment, Quarters barge remains.
- July 18, 2007: Final Inspection is held.

9. Construction Change Orders and Field Changes.

Change Order No. 1 (April 24, 2007):
The final quantity for bid item no. 4, Containment Dikes, exceeded the original contract quantity by 524 L.F. due to revisions in project design issued in Field Order No. 1.

The final quantity of Containment Dikes, as verified by the TBS project representative, was 8,024 L.F.
The contract time was also extended by 17 calendar days to account for adverse weather conditions from the Months of December to March. Final pre-construction survey data was submitted by the contractor on January 30, 2007, and revised plans (Field Order No. 1) were issued to the Contractor on February 7, 2007. Therefore, the contract time was extended by an additional 10 calendar days to account for delays to the contractors construction progress due to revisions in project design issued in Field Order No. 1.

ITEM NO.	ITEM	UNIT	ORIGINAL QUANTITY	UNIT COST	ORIGINAL BID AMOUNT	ADDITIONAL QUANTITY	ADDITIONAL AMOUNT	BID ITEM TOTAL $ AMOUNT
4	Containment Dikes	LF	7,500	$44.00	$330,000.00	524	$23,056.00	$353,056.00
						TOTAL:	**$23,056.00**	

Change Order No. 2 (June 27, 2007):
The contract time was extended by 6 calendar days to account for adverse weather conditions for the month of May.

Change Order No. 3 (August 22, 2007):
This project extended past the allotted contract time by 77 days. In lieu of reducing the value of work performed due to deductions from 77 days of Liquidated Damages, the Contractor has elected to pump an additional quantity of material equal to the total value of these liquidated damages. This change order increased

the contract quantity of hydraulic dredging by 13,890 C.Y., for a total increase in Contract Price of $106,260.00.

ITEM NO.	ITEM	UNIT	ORIGINAL QUANTITY	UNIT COST	ORIGINAL BID AMOUNT	ADDITIONAL QUANTITY	ADDITIONAL AMOUNT	BID ITEM TOTAL $ AMOUNT
5	Hydraulic Dredging	CY	830,650	$7.65	$6,354,472.50	13,890.196	$106,260.00	$6,460,732.50
						TOTAL:	**$106,260.00**	

Field Order No. 1 (February 6, 2007):

The project design template (profile) was shifted 150' Gulfward from the original template. The marsh creation area or "marsh platform" was also removed. The containment dike alignment was modified to coincide with the modifications to the design template.

Field Order No. 2 (April 24, 2007):

The plans were revised to include two (2) rows of sand fence, as opposed to the single row in the original plans. The original bid quantity was sufficient to construct the sand fence in this manner.

Field Order No. 3 (June 21, 2007):

This Field Order directed the Contractor to disperse 100% Bermuda seed, instead of Gulf Annual Rye. The Bermuda was found to be a more appropriate seed for the current growing season. Specification section TS-10 Seeding, 11.2 was revised as follows:

"Method: For New Cut - Bermuda (Cynodon sp.) seed is to be dispersed onto the island immediately after all construction, including dredging/ grading activities and sand fence instalation, is completed.

A total of 1,375 lbs of Bermuda (Cynodon sp.) pure live seed shall be evenly dispersed onto the dune platform of the New Cut Project Area. Twenty-five (25) lbs of Bermuda grass seed are required per acre. Approximately 55 acres of the dune platform is to be seeded. Seed dispersal shall be uniform across the entire dune platform."

10. Pipeline and Other Utility Crossings.

	Structure	**Owner**	**Rep. To Contact**
1.	Natural Gas Pipeline	Bois d' Arc	Greg Martin
2.			
3.		.	

11. Safety and Accidents.

There were no accidents reported during the New Cut Dune/Marsh Restoration Project.

12. Additional Comments Pertaining to Construction, Completed Projects, Lessons Learned, etc.

1. Issue: Hydraulic Fill - Settlement Verification Surveys

   Discussion: This project required that the fill area be inspected/surveyed every seven days, up to 28 days, to show that there had been no settlement before payments could be made to the Contractor. This required extensive surveying efforts and somewhat delayed payments to the Contractor. All surveys were taken after the material had dewatered and very little settlement, if any, was ever found between two surveys. On a beach / dune creation project such as this, where the majority of material is sand, it appears that this level of effort is not needed to document settlement of pumped material.

2. Issue: Borrow Area Surveys

   Discussion: The Cut to Fill ratio for this project was calculated to be less than 1. It is believed that the borrow area filled in substantially between the time pumping began and the time the final borrow area surveys were performed. In order to get an accurate cut to fill ratio, intermediate borrow area surveys should be required to give a true representation of the material removed from the borrow pit. This would also allow the Engineer to track the material accurately throughout the project.

3 Issue: Erosion and Ponding of Bay Berm Fill Area

   Discussion: No slope was specified for the berm area on either side of the dune. Leaving this area flat allows rainwater to pond, which eventually leads to a washout area. Future designs should consider applying a minimal slope to allow rainwater to drain.

13. Significant Construction Dates: To be filled out by DNR Construction Project Manager or Contracting Officer for construction for Agency responsible for construction.

ACTION	Date
Bid Opening	April 19, 2006
Construction Contract	
Preconstruction Conference	September 20, 2006
Notice to Proceed	October 1, 2006
Mobilization	January 17, 2007
Construction Start	January 17, 2007
Construction Completion	July 10, 2007
Final Acceptance	July 18, 2007

If different bids are taken, repeat this table to individually reflect each bid and attach tables.
Other significant Project Dates

	Date
Project Implementation closeout**	
Start of Preconstruction Monitoring***	
Preconstruction Aerial Photography Acquisition***	
Monitoring Plan Completion***	

** Final implementation closeout is made by either the DNR Project Manager or the Federal Agency Contracting Officer depending on which organization had lead role for construction of project.

*** To be completed by DNR Project Manager.